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EXAMINER

BEYEN, ZEWDU A

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/572,818 | Applicant(s) BICHOT ET AL. | |
| | Examiner ZEWDU BEYEN | Art Unit 2461 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/11/2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5 and 13-17 is/are allowed.
- 6) ☒ Claim(s) 6-12, and 18-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-34, have been examined, and are pending

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 6,8,18, 20 and 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Carrel to **(US7269182)**.

Regarding claims 6, 18 and 27 Carrel teaches a method for receiving a multicast transmission in

user devices in a network, the method comprising: establishing a unicast session between said an intermediate device and a dedicated terminal (**FIG.2 col.1 lines 51-55 discloses**

At block 202, a PPPoE unicast session is established between the access concentrator 111 and the host 101)

identifying multicast data packets associated with said a multicast group(**fig.2 col.1 lines 55- 57 discloses At block 203, the host 101 receives notification of an Internet**

Protocol (IP) multicast channel. Thus, inherently identify the packet associated with

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the channel)

monitoring transmissions of said multicast data packets between said intermediate device and said dedicated terminal by said user devices **(col.1 lines 57-58 discloses At block**

205, the host 101 listens for traffic on the IP multicast channel)

processing said multicast data packets by said dedicated terminal**(col.2 lines 3-5 discloses**

At block 219, the host 101 processes the multicast packet).

Regarding claims 8, and 20 Carrel teaches wherein said transmission of

multicast/broadcast data packets occurs in one of a wireless local area

network, a cable network and a 3G cellular network that supports broadcast services(see

fig.1).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 29-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Khan to (20020143951),

Regarding claims 29 and 32, Khan teaches means for establishing a unicast session with said multicast-to-unicast converter (Khan, [0030] discloses unicast client join a multicast group by sending a special "unicast join" control message 505 to a source server)

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means for encapsulating said multicast data packets in a unicast frame(Khan, abstract

The agents repackage the multicast information into a unicast data packet)

means for identifying multicast data packets associated with a multicast

group(inherently it has to identify the multicast data packets)

and means for forwarding said unicast frames via said unicast session(Khan, abstract

discloses the agents repackage the multicast information into a unicast data packet

and forward the unicast data packet to a client registered with the agent)

Regarding claim 30, Khan teaches testing to determine if said established unicast

session is still active; (Khan, [0033], discloses a unicast client may leave a multicast

group by failing to respond to a multicast group query either initiated by a router or

initiated by an agent. The agent poll or query its attached clients (i.e., the unicast

clients for whom the agent has been designated to provide multicast service))

performing one of continuing to receive multicast data packets via said already

established unicast session (Khan, [0030] discloses unicast client join a multicast

group by sending a special "unicast join" control message 505 to a source server. In

addition, the abstract discloses the agents repackage the multicast information into

a unicast data packet and forward the unicast data packet to a client registered with

the agent)

and selecting another dedicated terminal by said intermediate device with which said

intermediate device establishes a new unicast session (Khan, [0033] discloses If an

attached unicast client does not respond to the agent's query message, the agent

may stop forwarding multicast packets to the client(then continue to forward for

unicast clients that are responsive) . The agent also poll or send a query to its

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attached unicast clients to determine which multicast groups the agent needs to belong to and to whom the agent needs to forward information from those multicast groups)

Regarding claim 31, Khan teaches transmission of multicast data packets occurs in one of a local area network (Khan, [0004], and fig.2 disclose LAN, however it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of the combination by replacing the LAN by WLAN to improve transmission efficiency)

Regarding claim 33, Khan teaches means for testing to determine if a wake-up message is received (Khan, [0033], discloses a unicast client may leave a multicast group by failing to respond to a multicast group query either initiated by a router or initiated by an agent. The agent poll or query its attached clients (i.e., the unicast clients for whom the agent has been designated to provide multicast service))

performing one of continuing to receive multicast data packets via said already established unicast session (Khan, [0030] discloses unicast client join a multicast group by sending a special "unicast join" control message 505 to a source server. In addition, the abstract discloses the agents repackage the multicast information into a unicast data packet and forward the unicast data packet to a client registered with the agent)

and selecting another dedicated terminal by said intermediate device with which said intermediate device establishes a new unicast session (Khan, [0033] discloses If an attached unicast client does not respond to the agent's query message, the agent

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may stop forwarding multicast packets to the client(then continue to forward for unicast clients that are responsive) . The agent also poll or send a query to its attached unicast clients to determine which multicast groups the agent needs to belong to and to whom the agent needs to forward information from those multicast groups)

Regarding claim 34, Khan teaches a plurality of unicast sessions are established in order to support multiple transmission rates (Khan, fig.4 discloses plurality of unicast sessions)

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 7, 10-12, 19, 22-24, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carrel to (US7269182), in view of Khan to (20020143951),

Regarding claims 7, 19, and 28 Carrel does not explicitly teach testing to determine if a wake-up message is received from said dedicated terminal;
performing one of continuing to receive multicast data packets via said already established unicast session and selecting another dedicated terminal by said intermediate device with which said intermediate device establishes a new unicast session

However, Khan teaches testing to determine if a wake-up message is received from said dedicated terminal **(Khan, [0033] discloses a unicast client may leave a multicast group by failing to respond to a multicast group query either initiated by a router or initiated by an agent. The agent poll or query its attached clients (i.e., the unicast clients for whom the agent has been designated to provide multicast service))** performing one of continuing to receive multicast data packets via said already established unicast session **(Khan, [0030] discloses unicast client join a multicast group by sending a special "unicast join" control message 505 to a source server. In addition, the abstract discloses the agents repackage the multicast information into a unicast data packet and forward the unicast data packet to a client registered with the agent)** and selecting another dedicated terminal by said intermediate device with which said intermediate device establishes a new unicast session **(Khan, [0033] discloses If an attached unicast client does not respond to the agent's query message, the**

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agent may stop forwarding multicast packets to the client(then continue to forward for unicast clients that are responsive). The agent also poll or send a query to its attached unicast clients to determine which multicast groups the agent needs to belong to and to whom the agent needs to forward information from those multicast groups)

Therefore it would have been obvious to one of ordinary skilled in the art at the time the invention was made to enable the system of Carrel testing to determine if a wake-up message is received from said dedicated terminal;performing one of continuing to receive multicast data packets via said already established unicast session and selecting another dedicated terminal by said intermediate device with which said intermediate device establishes a new unicast session, as suggested by Khan. This modification would benefit the system to efficiently process the multicast packet.

Regarding claims 10 and 22, Carrel does not explicitly teach a plurality of unicast sessions are established in order to support multiple transmission rates

However, Khan teaches wherein a plurality of unicast sessions are established in order to support multiple transmission rates (Khan, fig.4 discloses plurality of unicast sessions)

Therefore it would have been obvious to one of ordinary skilled in the art at the time the invention was made to enable the system of Carrel include a plurality of unicast sessions are established in order to support multiple transmission rates, as suggested by Khan. This modification would benefit the system to support multiple transmission at one time.

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Regarding claims 11 and 23, Carrel does not explicitly teach wherein said plurality of unicast sessions are between said ID and a plurality of dedicated terminals

However, Khan teaches said plurality of unicast sessions are between said ID and a plurality of dedicated terminals(**Khan,fig.4 discloses plurality of unicast sessions**)

Therefore it would have been obvious to one of ordinary skilled in the art at the time the invention was made to enable the system of Carrel wherein said plurality of unicast sessions are between said ID and a plurality of dedicated terminals, as suggested by Khan. This modification would benefit the system to manage the transmission.

Regarding claims 12 and 24, Carrel does not explicitly teach wherein said intermediate device is a router

However, Khan teaches wherein said intermediate device is a router (**Khan, fig.2 discloses router that interconnect unicast clients with multicast group**)

Therefore it would have been obvious to one of ordinary skilled in the art at the time the invention was made to enable the system of Carrel include intermediate device is a router, as a design choice.

7. Claims 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carrel to(**US7269182**), in view of Khan to (**20020143951**) and further in view of Hardisty to (**US20020141394**)

Regarding claim 25, Carrel teaches identifying multicast data packets associated with said multicast group(**fig.2 col.1 lines 55- 57 discloses At block 203, the host 101 receives notification of an Internet Protocol (IP) multicast channel. Thus, inherently**

identify the packet associated with the channel); monitoring transmissions of said multicast data packets (col.1 lines 57-58 discloses At block 205, the host 101 listens for traffic on the IP multicast channel, furthermore , FIG.2 col.1 lines 51-55 discloses At block 202, a PPPoE unicast session is established between the access concentrator 111 and the host 101. Thus , the host 101 only monitor the IP multicast channel after it already established unicast session with the access concentrator 111, so inherently there is an already established unicast session)

establishing a unicast session and processing multicast data packets if an already established unicast session does not exist(**fig.2 col.1 50-52 discloses At block 201, the host 101 transmits a PPPoE active discovery request (PADR) to the access concentrator 111. Furthermore, col.2 lines 3-5 discloses At block 219, the host 101 processes the multicast packet)**

Carrel does not explicitly teach issuing a request to join a multicast group; determine whether said identified multicast data packets are being transmitted in an already established unicast session

However, Khan teaches issuing a request to join a multicast group (Khan, [0030] discloses unicast client join a multicast group by sending a special "unicast join" control message 505 to a source server)

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Carrel issuing a request to join a multicast group, as suggested by Khan. This modification would benefit the system to efficiently join a transmission group.

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The combination of Carrel and Khan does not explicitly teach determine whether said identified multicast data packets are being transmitted in an already established unicast session

However, Hardisty teaches determine whether said identified multicast data packets are being transmitted in an already established unicast session **([0019] discloses determining whether a multicast session is established with the remote system and if it is established adding the address of the remote system to an address list of the multicast session but if it is not established determining whether to establish a multicast session or a unicast session as appropriate with the remote location and establishing a new multicast session and adding the address of the remote location to an address list of the new multicast session or establishing a unicast session as determined)**

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of The combination of Carrel and Khan determine whether said identified multicast data packets are being transmitted in an already established unicast session, as suggested by Hardisty . This modification would benefit the system to efficiently establish a session.

Regarding claim 26, Carrel does not explicitly teach testing to determine if said already established unicast session is still active; and performing one of continuing to receive multicast data packets via said already established unicast session and establishing a new unicast session.

However, Khan teaches testing to determine if said already established unicast session is still active **(Khan, [0033] discloses a unicast client may leave a multicast group by failing to respond to a multicast group query either initiated by a router or initiated by an agent. The agent poll or query its attached clients (i.e., the unicast clients for whom the agent has been designated to provide multicast service))** performing one of continuing to receive multicast data packets via said already established unicast session and establishing a new unicast session **(Khan, [0030] discloses unicast client join a multicast group by sending a special "unicast join" control message 505 to a source server. In addition, the abstract discloses the agents repackage the multicast information into a unicast data packet and forward the unicast data packet to a client registered with the agent)**

Therefore it would have been obvious to one of ordinary skilled in the art at the time the invention was made to enable the system of Carrel testing to determine if said already established unicast session is still active; and performing one of continuing to receive multicast data packets via said already established unicast session and establishing a new unicast session, as suggested by Khan. This modification would benefit the system to efficiently process the multicast packet.

8. Claims 9, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carrel to **(US7269182)**, in view of Chow to **(20030053434)**

Regarding claims 9 and 21 Carrel does not explicitly teach wherein all user devices in

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said multicast group operate in monitor mode and said dedicated terminal operates in normal mode

However, Chow, teaches wherein all user devices in said multicast group operate in monitor mode and said dedicated terminal operates in normal mode ([0133], fig.5 disclose the rest of the multicast group are in listen-mode while one of them on push-to-talk mode)

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Carrel by wherein all user devices in said multicast group operate in monitor mode and said dedicated terminal operates in normal mode, as suggested by Chow. This modification would benefit the system by providing a technique to improve transmission quality.

Allowable Subject Matter

Claims 1-5 and 13-17 are allowed.

Response to Arguments

Applicant's arguments with respect to claims 6-12 and 18-34, have been considered but are not persuasive.

Applicant's argues that neither Khan nor Carrel show or suggest any dedicated terminal. Examiner respectfully disagrees and Applicant reminded that claims are given the broadest interpretation. Thus, establishing a unicast session with any two terminals reads on "establishing a unicast session with a dedicated terminal." Further more, Applicant's

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argues Khan does not teach encapsulating multicast data packets in a unicast frame.

Examiner respectfully disagrees and Applicant reminded that claims are given the broadest interpretation. Thus, **repackage the multicast information into a unicast data packet (see Khan, abstract) reads on** encapsulating multicast data packets in a unicast frame.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ZEWDU BEYEN whose telephone number is (571)270-7157. The examiner can normally be reached on Monday thru Friday, 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 1-571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO

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Customer Service Representative or access to the automated information system, call
800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Z. B./

Examiner, Art Unit 2461

/Huy D Vu/

Supervisory Patent Examiner, Art Unit 2461